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Satoshi Arakawa

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

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1 RECORD OF ORAL HEARING
2 UNITED STATES PATENT AND TRADEMARK OFFICE

3
4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
6

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8 Ex parte SATOSHI ARAKAWA
9

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11 Appeal 2009-010718
12 Application No. 10/714,851
13 Technology Center 2800
14

15 Oral Hearing Held: March 9, 2010
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18 Before KENNETH W. HAIRSTON, JOHN C. MARTIN, and
19 THOMAS S. HAHN, Administrative Patent Judges
20

21
22 ON BEHALF OF THE APPELLANTS:
23

24 DION R. FERGUSON, ESQ.
25 Sughrue Mion, PLLC
26 2100 Pennsylvania Avenue, N.W.
27 Suite 800
28 Washington, D.C. 20037-3213
29 (202) 857-3221

1 The above-entitled matter came on for hearing on Tuesday,
2 March 9, 2010, commencing at 10:24 a.m., at the U.S. Patent and Trademark
3 Office, 600 Dulany Street, Alexandria, Virginia, before Jan M. Jablonsky,
4 Notary Public.

5 JUDGE HAIRSTON: Mr. Ferguson, do you have your
6 business card?

7 MR. FERGUSON: Yes, I do, actually.

8 JUDGE HAIRSTON: Okay. Do you mind providing a
9 copy -- thank you. You may begin.

10 MR. FERGUSON: Good morning. I'm here on behalf of
11 Appellant in this case. And I believe the issue in this particular appeal is
12 fairly -- fairly narrow and fairly straightforward at this point. And kind
13 of -- everything comes back to in Claim 1 whether the feature wherein the
14 stimulating light projecting means onto the radiation image converter panel
15 stimulating light in a wavelength range where the rate of change of the
16 intensity of the stimulated emission to a given change of the wavelength of
17 the stimulating light is not larger than 1 percent per nanometer and is not
18 smaller than negative 1 percent per nanometer. And wherein the wavelength
19 of the stimuable light fluctuates in a manner that would cause a change in
20 intensity of the stimuable emission.

21 The Examiner in this case has used a combination of references,
22 Nakamura, U.S. Patent number 4,780,376, Neyens, U.S. Patent number
23 5,517,034 and Bradley, the Bradley reference, U.S. Patent number 5,043,991
24 to allege that Claim 1 would have been obvious at the time of the invention.
25 Clearly Appellants disagree with this, namely because the combination of
26 references, taken individually or in combination don't teach this idea that

1 there -- that given a change of wavelength of the stimulating light that
2 there -- that the wave -- that the change in rate or -- excuse me, the rate of
3 change of the intensity of the stimulated emissions would be maintained
4 within the range cited in claim, and in particular given the fact that the
5 wavelength of the stimulating light is going to fluctuate.

6 The Examiner -- looking at the Examiner's reply, it indicates
7 that he believes -- or the Examiner believes that Nakamura discloses a graph
8 showing that the rate of change of the emissions changes within the range
9 of -- recited in Claim 1 based on the change in wavelength. And if you look,
10 it's -- the Examiner's Figure is shown on page 5 of the Examiner's response.
11 There's two problems. Appellant submits there's two problems with the
12 Examiner's assertion with regards to this. One, the Examiner is attempting
13 to put a scale to this particular figure when there's no teaching of what this
14 scale possibly could be. There is no -- Nakamura does not provide any data
15 points for this scale. It just show -- or for this graph. It just shows the -- just
16 shows the graph. So to try and impart these two -- these two lines, I guess,
17 two dotted lines, and claim that they're within 99.5 percent of the peak
18 stimulated intensity emission, or stimulated emission intensity, there's no
19 support for these two lines that that's what they actually show.

20 The second problem with the citation in Nakamura, especially
21 with figure -- in regards to Figure 1, is that the graph is actually showing a
22 relative intensity of stimulated emission, not the actual stimulated emission,
23 or not the actual intensity of stimulated emission. In other words, if you
24 look at the vertical -- if you look at the vertical axis on that graph it's
25 between zero and one. So there is no way to correlate the graph of
26 Nakamura to show that it has -- that if a wavelength of the stimulating light

1 is changed, that the stimulated -- the stimuable emission would change
2 within a very small percentage per nanometer, which is recited in Claim 1.

3 Initially the Examiner had -- had conceded that Nakamura
4 didn't teach the range and -- doesn't teach that particular range, and actually
5 cited to Neyens, the Neyens reference as disclosing the range. And he cites
6 to -- particularly to Figure 1. Figure 1 of Neyens suffers from a
7 similar -- similar problem, in the fact that there are these -- you -- Figure 1
8 merely shows the graph, but Neyens doesn't disclose any data points upon
9 which to draw a conclusion based on the graph outside of the maximum, the
10 maximum intensity of the stimuable emissions. Thus it's hard to -- it would
11 be very, very difficult to look at this particular graph and say, "Oh" -- or
12 look at this graph and say that if the wavelength changes of the stimulating
13 light, that the change in emission would be within 1 percent per nanometer
14 or negative 1 percent per nanometer.

15 JUDGE MARTIN: Excuse me, Mr. Ferguson.

16 MR. FERGUSON: Yes.

17 JUDGE MARTIN: Let me question you about a few of those
18 points. It seems to me the Examiner is relying on these figures just to show
19 that it would have been obvious to pick a stimulation wavelength that's at the
20 peak of what looks like a Bell curve.

21 MR. FERGUSON: Yes.

22 JUDGE MARTIN: And you don't have a problem with that,
23 right?

24 MR. FERGUSON: Well, the claim requires that there is a
25 change in wavelength of the stimulating light.

26 JUDGE MARTIN: Right, okay --

1 MR. FERGUSON: So even if the -- even if you have -- start at
2 the maximum, and you change -- and you change the wavelength from the
3 maximum, there is no way of knowing how that change -- based on just the
4 graph alone, there is no way to impart that percentage change per nanometer.
5 There is no data points. The only thing that -- if we were claiming -- if the
6 claim had required merely a -- you know, a wavelength, you know, that
7 caused no change -- and the -- and I believe in the Examiner's reply he notes
8 that -- on page 3 he notes that the specification for the Appellant's
9 invention -- says --said rate of change δI of the intensity of the stimulated
10 emission, so on and so forth, that at a particular point the change is the
11 tangent -- the slope of the tangent of the -- of the line to the Bell curve
12 divided by the intensity. And for a particular point, that's not really -- that's
13 not the argument. At a particular point, that's -- I -- let me rephrase. At a
14 particular point, yes, the tangent at the maximum -- the -- excuse me.

15 The slope of the line tangent to the maximum is going to be
16 zero. The question is what happens when that wavelength changes. Because
17 the wavelength of the laser -- the wavelength of the stimulating light,
18 according to Claim 1, has to change. It's part of the claim. It clearly -- the
19 wavelength -- and to repeat, Claim 1 recites, "Wherein the wavelength of the
20 stimuable light fluctuates in a manner that would cause a change in intensity
21 to stimuable emission." So there is going to be change. The question is is
22 what -- is how much is that change.

23 JUDGE MARTIN: So the Examiner is not incorrect to cite
24 Bradley for the proposition that there is going to be some inherent
25 fluctuation of that stimulating wavelength, right?

1 MR. FERGUSON: I do not believe that point has ever been
2 argued. Bradley clearly indicates that even the best stable lasers show
3 a -- show a wavelength change over light. I don't believe that we've
4 ever -- that Appellant has ever argued that. I'm not sure that's ever really
5 been up for --

6 JUDGE MARTIN: I'm sorry. When you say argue that, you
7 mean argued against --

8 MR. FERGUSON: Well, yeah. I'm not sure that point has ever
9 been up for debate, I guess is the question. I mean --

10 JUDGE MARTIN: Well, isn't that the Examiner's whole point?
11 That when you combine the teachings of Nakamura and Neyens, somebody
12 skilled in the art would want to pick the stimulating wavelength to be right at
13 the peak to get the maximum light output, and then somebody skilled in the
14 art -- well, whether they knew it or not, Bradley shows that well, you can't
15 actually lock that wavelength in exactly at the peak. You're going to have
16 some fluctuation, inherent fluctuation, when you try to satisfy -- follow the
17 teachings of the first two references. And then -- let me just finish this
18 thought. The Examiner's position as I understand it is there is probably -- I
19 mean, there is, because of the shape of the curve, there is some amount of
20 movement on either side of that center point that's going to satisfy that claim
21 limitation, even if it's just the tiniest bit of movement shifting back and forth.

22 MR. FERGUSON: The question that would come -- that would
23 be brought up by that is based on the -- based on the data points that are
24 given and -- or lack thereof for Nakamura and Neyens, everything
25 is -- everything in the claim is based on percentages per nanometer. So even

1 if you had a small, real small change in wavelength, there's no way of
2 knowing that the change that happens is -- will satisfy the percentage points.

3 JUDGE MARTIN: The percentage -- that's just a range.

4 MR. FERGUSON: And the question is -- is, based on that
5 curve, if you -- if you zoom that curve in far enough to the point where you
6 could see -- where you're focusing just on the area around the peak, what
7 happens then? I mean, from a distance and when you look at the whole
8 graph, it looks like there's a nice -- nice shaped Bell curve, you know, that
9 it's broad enough that it might. But without having the data points to
10 actually support that point, it's hard to say. It's at least ambiguous in some
11 respects. Because you don't really know what the -- what kind of change is
12 happening, once you get away from that maximum.

13 JUDGE MARTIN: But you don't have to go very far from the
14 maximum. The claim doesn't specify that you have to satisfy that percentage
15 range limitation on the intensity for the full range of fluctuation on the laser.
16 All you need to satisfy the claim is just the tiniest bit of fluctuation, and
17 then see whether the result of that tiny bit of fluctuation falls within the
18 claimed range. And since we've got a curve at our -- looks like a smooth
19 curve at our peak in both of our first and second references, it doesn't seem
20 like an unreasonable position to me to conclude that you inherently are
21 going to satisfy that claim language for at least a very minuscule shift in that
22 stimulating wavelength.

23 MR. FERGUSON: Well, I would come back to -- there is a line
24 of Federal Circuit decisions that say that inherency can't be established by a
25 possibility. It has to happen. And I really wish I had it in front -- had that
26 case citation in front of me. But --

1 JUDGE HAIRSTON: In re Robertson.

2 MR. FERGUSON: Pardon?

3 JUDGE HAIRSTON: In re Robertson.

4 MR. FERGUSON: Thank you. You know, if you're going to
5 say something is inherent, then it has to be there. There -- it can't be a
6 question. It can't be a possibility. It's required by the disclosure. And in
7 this case -- and if you're looking at -- at least at -- well, really at both
8 Nakamura and Neyens, but especially at Nakamura, Nakamura shows a
9 relative intensity. I mean, there -- without data points, it's all relative to
10 something else. As I reviewed Nakamura, there -- doesn't appear to identify
11 what -- what they're taking -- what the relative -- what they're taking those
12 points relative to. But it still comes back to, you know, the change you see
13 in the graph in Nakamura is -- changes in relative intensity is not the actual
14 intensity. So the -- that particular graph is questionable at best.

15 What the graphs -- what the graphs you have in Neyens -- if
16 you -- depending on what graph you're looking at, the -- let's say the -- looks
17 like the lithium-1 graph, it's not a perfect Bell curve. There is clearly
18 no -- without the data points to support, you know, this is what's happening
19 at -- you know, at the maximum. If you shift half a nanometer, you know,
20 this is your intensity. If you shift, you know, a full nanometer, here's what
21 your -- here is what your intensity is. There is no scale imparted to the
22 graphs.

23 And as noted in the Reply Brief, according to Hockerson and
24 Halbestedt, you can't impart any sort of scale to these graphs without a
25 specific teaching to do so. Here we don't have that. So even if you say, yes,
26 you know, there is -- there is some drift. There's -- it's going to drift away

1 from this maximum point, I -- you still come back to there just doesn't
2 appear to be any solid teaching of what these stimuable emissions are going
3 to be once you get away from it, which makes it very -- which would make it
4 very difficult to sit and say that it's within the -- within the percentage ranges
5 of -- recited in Claim 1.

6 And, you know, I'll make the, kind of, note that the -- you
7 know, the range in Claim 1 is a percentage per nanometer. It's not simply
8 saying that the intensity changes by a certain -- you know, a certain -- by,
9 you know, a certain number of units. It changes by a percentage, and that is
10 different than what would be shown in this graph as well. So there is -- I
11 certainly think that there is enough question in -- of what can be taken from
12 the graphs in Nakamura and Neyens to render at least some severe questions
13 as to the inherency that drift would cause -- that the drift would result in a
14 change in wavelength within these percentages.

15 JUDGE HAHN: Counsel.

16 MR. FERGUSON: Yes.

17 JUDGE HAHN: My question goes to the scope of the claim
18 here, because -- and what I'm zeroing in here, or trying to, is the recitation of
19 stimulating light in a wavelength range where there is a change of intensity.
20 In other words, I am not seeing in the claim that the wavelength range is
21 defined.

22 MR. FERGUSON: No. The wavelength range is not defined.

23 JUDGE HAHN: Or is there -- it's an inter-relationship as I'm
24 understanding the scope of the claim, between wavelength range and
25 intensity change?

1 MR. FERGUSON: Yes. The claim is set -- the claim is written
2 such that there is a correlation between the wavelength range of the
3 stimulating light and the -- and the rate of change of the intensity of the
4 stimuable emission when it changes within that range. So yes, there is -- it's
5 a correlation, not a defined range.

6 JUDGE HAHN: Thank you.

7 MR. FERGUSON: And I believe that's borne out in the figures
8 from the Appellant's specification.

9 JUDGE HAIRSTON: Is that it?

10 MR. FERGUSON: I believe -- I mean, that -- I think that's the
11 crux of the difference, I guess between the Appellant's position and the
12 Examiner's position at this time, is just the drawings just can't impart what
13 the -- they just don't impart what the Examiner is trying to read into them,
14 especially based on the fact that there is just no -- there is no scales given to
15 the drawings themselves. So --

16 JUDGE HAIRSTON: Okay.

17 MR. FERGUSON: -- I believe that is it for --

18 JUDGE HAIRSTON: Thank you, Counselor.

19 Whereupon, at 10:43 a.m., the proceedings were concluded.

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